Department of Energy
Office of Legacy Management

February 27, 2007

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Thomas Schneider, Project Manager
Ohio Environmental Protection Agency
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

SUBJECT: **Transmittal of the December 18, 2006 Inspection Checklist for the On-Site Disposal Facility**

References:
1) Geosyntec Consultants, 2006, "Memorandum, Response to OEPA's Concerns About Cell 8 Fernald Closure Project, Fernald, Ohio

2) U.S. Department of Energy (DOE, 2006, "Comprehensive Legacy Management and Institutional Controls Plan," Final, Fluor Fernald, DOE, Fernald Area Office, Cincinnati, OH, June

The purpose of this letter is to transmit the completed checklist for the December 18, 2006 inspection of the On-Site Disposal Facility (OSDF) for your review. Photographs of the disposal facility and the surrounding area were taken and are included with this report. The inspection was conducted with participation from the Ohio Environmental Protection Agency (OEPA), Tetra Tech, the S. M. Stoller Corporation, and Fluor Fernald, Inc. The inspection was the 14th conducted on the Cell 1 Cap, the 10th conducted on the Cell 2 Cap, the 6th conducted on the Cell 3 Cap, the 5th conducted on the Cell 4 Cap, the 5th conducted on the Cell 5 Cap, the 3rd conducted on the Cell 6 Cap and the first complete inspection for the Cell 7 and 8 caps.

In general, establishment of the vegetative cover is progressing well. Cells 1 through 6 had full stands of grass, and previously-repaired areas have recovered nicely. Erosion is primarily limited to the west side of Cells 7 and 8, where seeding late in the fall did not yet permit an adequate stand of grass to be established. Several bare areas are present, and small mammals have burrowed holes

19901 Germantown Road, Germantown, MD 20874	☐	☐	2597 B 3/4 Road, Grand Junction, CO 81503
3610 Collins Ferry Road, P.O. Box 880, Morgantown, WV 26507	☐	☐	626 Cochrans Mill Road, P.O. Box 10940, Pittsburgh, PA 15236
1000 Independence Ave., S.W., Washington, DC 20585	☐	☐	12101 Airport Way, Unit C, Broomfield, CO 80021-2583
11003 Hamilton-Cleves Hwy., Harrison, OH 45030	X	☐	955 Mound Road, Miamisburg, OH
232 Energy Way, N. Las Vegas, NV 89030	☐	☐	

in all of the cell caps. The attached inspection checklist details where repairs are needed. As the checklist shows, repairs that require soil work and reseeding will be addressed in the spring.

Some concern was raised regarding the uneven surface that was observed along the south side of Cell 8. The uneven surface is a result of the seedbed preparation process, when a soil stabilizer is used to break up compacted soil. Tire tracks from the stabilizer left a series of depressions at a 45-degree angle to the slope. The concern was that these depressions may accelerate erosion by concentrating flow. After an evaluation of the slope was performed by Geosyntec Consultants, the Office of Legacy Management decided to continue monitoring for erosion and make any repairs that may be necessary in the spring (Reference 1). As stated above, some erosion repair is already needed for the west slope of Cells 7 and 8.

The next OSDF Cell Cap inspection is scheduled for March 2007. During the same week, the first quarterly Fernald Site inspection will be conducted, weather permitting. In addition to the quarterly OSDF inspections, a quarterly Fernald Site inspection will be conducted for a period of one year as directed by the Comprehensive Legacy Management and Institutional Controls Plan, June 2006 (Reference 2).

If you have any questions regarding this matter, please call me at 513-648-3148.

Sincerely,

Jane Powell

Jane Powell,
Fernald Site Manager
DOE-LM-20.1

Enclosures

cc w/enclosure:
M. Cullerton, Tetra Tech
M. Miller, Stoller
M. Murphy, USEPA-V, A-18J
G. Jablonowski, USEPA-V, SR-6J
T. Schneider, OEPA (3 copies of enclosure)
S. Helmer, ODH
Project Record File FER030.1(A) (thru D. Metzler)

cc w/o enclosure:
J. Homer, Stoller
F. Johnston, Stoller
L. McHenry, Stoller

OSDF Cell Cap Post Closure Inspection Checklist

Date of Inspection: December 18, 2006 Weather Conditions: Cloudy, cool, misty

Time of Inspection: 1:00 PM Temperature: 59 °F Wind Speed (Miles per hour) and Direction:

Inspection By: SM Stoller, Fluor Fernald, Tetra Tech, OEPA, Transect Direction**: North/South

Inspection Component	Condition for Each Cell Cap A* or U*								Comments	Addressed
	1	2	3	4	5	6	7	8		
1. Entrance Road/Monitoring Access Road										
1A. Verify entrance gate, lock and signage are intact and in good working order.	A							A		
1B. Verify that access gates are locked to prevent unauthorized entry.	A							A		
1C. Visually observe condition of access road for signs of erosion, ruts, standing water, proper drainage and excess vegetation.	A	A	A	A	A	A	A	A		
1D. Verify that access road surfacing, cross slope, reflectors, and signage are intact and in good condition.	A	A	A	A	A	A	A	A		
2. Chain Link Fence and Signage										
2A. Walk length of fence and ensure fence, posts, etc. are intact and in good condition. Ensure that gates are closed/locked to prevent unauthorized entry.	A	A	A	A	A	A	A	A		
2B. Verify that the proper signage is intact and in good condition at the following locations: Restricted Access; Certified Area; and Restored Area. (Some signs not installed at this time).	A	A	A	A	A	A	A	A		
2C. Check for vegetation growing over fences, barricades, signs and any noxious vegetation per State of Ohio Regulations (attached) and invasive plants growing on or around OSDF perimeter.	A	A	A	A	A	A	A	A		
3. Surface Water Management										
3A. Check integrity of drainage channels around OSDF for erosion or debris restricting water flow (see attached map). Build up of debris/sedimentation in drainage ditch is not to exceed 6 inches.	A	A	A	A	A	A	A	A		
3B. Visually check the integrity of rip-rap in drainage channels for signs of deterioration or removal of rock.	A	A	A	A	A	A	A	A		
3C. Visually check for the presence of woody vegetation growing in drainage channels and in rip-rap	U	U	A	A	A	A	A	A	Woody vegetation is present in the north and east (north end) drainages and needs to be removed by hand or by chemical means.	Will address in the spring.
3D. Visually check the integrity of run-on and run-off control features including: Ditch checks, Gravity Inlet structures, and Culverts.	A	A	A	A	A	A	A	A		

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Inspection Component	Condition for Each Cell Cap A* or U*								Comments	Addressed
	1	2	3	4	5	6	7	8		
4. (A) Final Cover										
4A. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually inspect for the following items:**										
4A1. Inspect erosion rills/channels. Flag any observable rills/channels greater than 3 inches wide and 6 inches deep or excessive erosion.	A	A	A	A	A	A	A	U	Cell 8, west, 6:1, several large rills/holes need to be filled in with soil and re-seeded.	Awaiting better soil conditions.
4A2. Any observable depressions, settlement/subsidence, slumping or desiccation cracks. Flag any observable depressions, slumps, settlement/subsidence or dessication cracks.	A	A	A	A	A	A	A	U	Cell 8, west, 6:1, depressions created during construction activities need to be filled in with soil or leveled out and re-seeded.	Awaiting better soil conditions.
4A3. Any ponding or standing water. Flag any standing water.	A	A	A	A	A	A	A	A		
4A4. Evidence of burrowing animals or other bio-intrusion. Flag any observable evidence of bio-intrusion.	U	U	U	U	U	U	A	A	Cell 4, west, 6:1 and top, large ground hog openings need filled in and reseeded. The presence of moles or similar burrowing animals is very evident over most of the cells. Large mounds are present on caps 1 thru 6.	Awaiting better soil conditions.
4A5. Evidence of vehicle traffic on the OSDF cap.	A	A	A	A	A	A	U	U	Cell 7, west, 6:1, tractor tire tracks from driving on cell cap immediately following cover completion (2 locations). Cell 8, west, damage from vehicle tires during construction.	Awaiting better soil conditions.
4B. Walk toe of slope and visually inspect for the following:										
4B1. Evidence of settlement/subsidence, erosion, and seepage. Flag any observable evidence of settlement/subsidence, erosion, or seepage.	A	A	A	A	A	A	A	A		
4B2. A 20-ft corridor at the toe for the presence of woody vegetation, siltation, and/or biointrusion. Flag any woody vegetation, siltation, and/or biointrusion.	A	A	A	A	A	A	A	A		

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4B3. Condition of rip-rap. Flag any observable abnormalities.	A	A	A	A	A	A	A	A		
4C. Inspect toe at final cover for evidence of freezing or siltation. Flag any observable abnormalities.	A	A	A	A	A	A	A	A		
4D. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually check vegetative cover for the following:										
4D1. General health of grass cover and signs of stressed or dead grass should be noted.	A	A	A	A	A	A	A	A		
4D2. Adequate grass coverage/density with no bares spots greater than 3-ft in diameter. Flag any bare spots greater than 3-ft in diameter. Any areas with questionable vegetative coverage will be sampled for percent cover and type of vegetation using meter-square quadrats.	U	U	U	A	A	A	U	U	Cell 1, north, bare area needs seeded. Cell 2, top, bare area needs seeded. Cell 3, east, 6:1, 2 areas need seeded. Cell 7, east, 6:1, areas needs seeded. Cell 8, east, 6:1 areas need additional seed.	Awaiting better soil conditions.
4D3. Inspect the cover for the presence of woody vegetation (i.e., trees or shrubs) or noxious/invasive plants growing. Flag any woody and/or noxious/invasive vegetation for removal/herbicide.	A	U	A	U	U	A	A	A	On several cells, dormant thistle containing seeds need to be removed by hand. In some places rosettes are sprouting.	Partially addressed. Will complete this spring.
4E. Visually inspect locations where Cell 1 monitoring equipment and infrastructure has been removed. Check for settling of fill material. Check for adequate vegetative cover.	U								East side, 6:1, one area needs repair. Additional soil and seed is necessary.	Awaiting better soil conditions.
5. Groundwater Monitoring Wells										
5A. Visually inspect all groundwater wells for damage and integrity of well infrastructure.	A	A	A	A	A	A	A	A		
5A1. Groundwater Monitoring Wells	A	A	A	A	A	A	A	A		
5A2. Horizontal Monitoring Wells	A	A	A	A	A	A	A	A		

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6. Miscellaneous										
6A. Visually inspect the integrity of survey benchmarks. Flag/note any abnormalities.	A	A	A	A	A	A	A	A		
6B. Visually inspect the integrity of the perched water interceptor trench (once installed). Note any abnormalities.	A	A	A	A	A	A	A	A		
6C. Visually observe/inspect the corridor 50-ft outside of OSDF for signs/evidence of land use changes, settlement/subsidence, erosion, standing water, encroachment, livestock grazing or noxious vegetation. Note any changes/abnormalities.	A	A	A	A	A	A	A	A		
6D. Visually inspect all infrastructure for any act of vandalism.	A	A	A	A	A	A	A	A		
6E. List any other observations not listed above.	U	U	A	U	A	U	A	U	Cell 1, rock pile and buried plastic. Cell 2, east, large piece of concrete needs removed. Soil and seed are needed to repair hole. Cell 4, east and top-west, piles of rocks. Cell 6, west and top, piles of rocks. Cell 8, west side needs staples in several areas. Cell 8, east, rock pile.	Jan. 2007 Need Gator to haul concrete Jan. 2007 Jan. 2007 Jan. 2007 Jan. 2007

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REFERENCE SOURCES FOR POST CLOSURE OSDF INSPECTIONS

1. Post-Closure Care and Inspection Plan, On-Site Disposal Facility
2. On-Site Disposal Facility Technical Specification #'s 02831, 02270, 02271, and 02930
3. On-Site Disposal Facility Drawing #'s 90X-5500-E-00851 and 90-5500-G-00577
4. Construction Drawing # 90X-6000-G-00073
5. Phase III Drawing #'s 90X-6000-G-00302 and 90X-6000-G-00310

On-Site Disposal Facility Inspection Report

December 2006

OSDF

12/06 Image

Stoller Legacy Management Team

Stoller • Battelle • SAIC • Source One

Office of Legacy Management

East Face Cell 1

West Face Cell 1

North Face Cell 1

North Drainage (looking east)

East Face Cell 2

West Face Cell 2

East Face Cell 3

West Face Cell 3

East Face Cell 4

West Face Cell 4

East Face Cell 5

West Face Cell 5

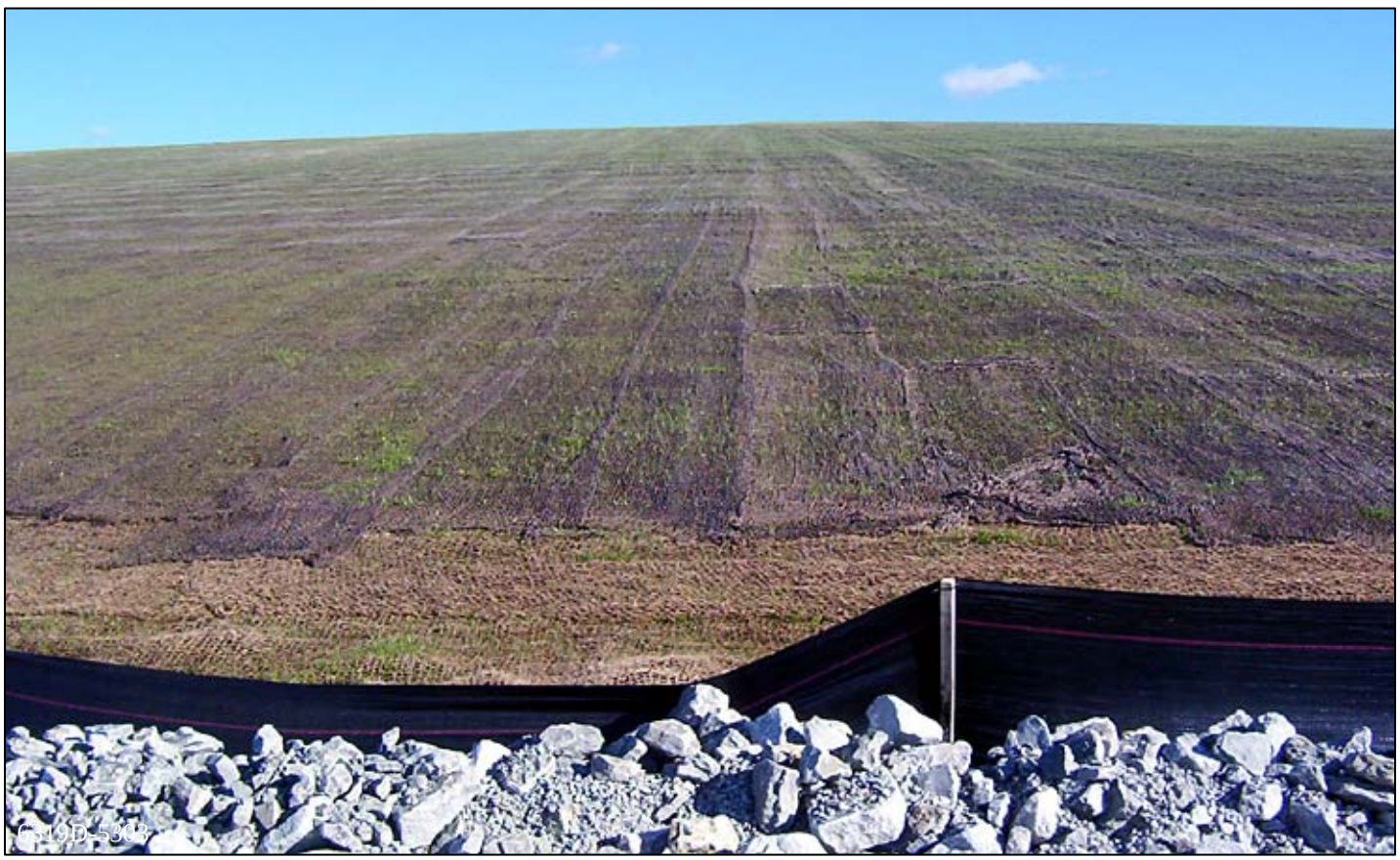
East Face Cell 6

West Face Cell 6

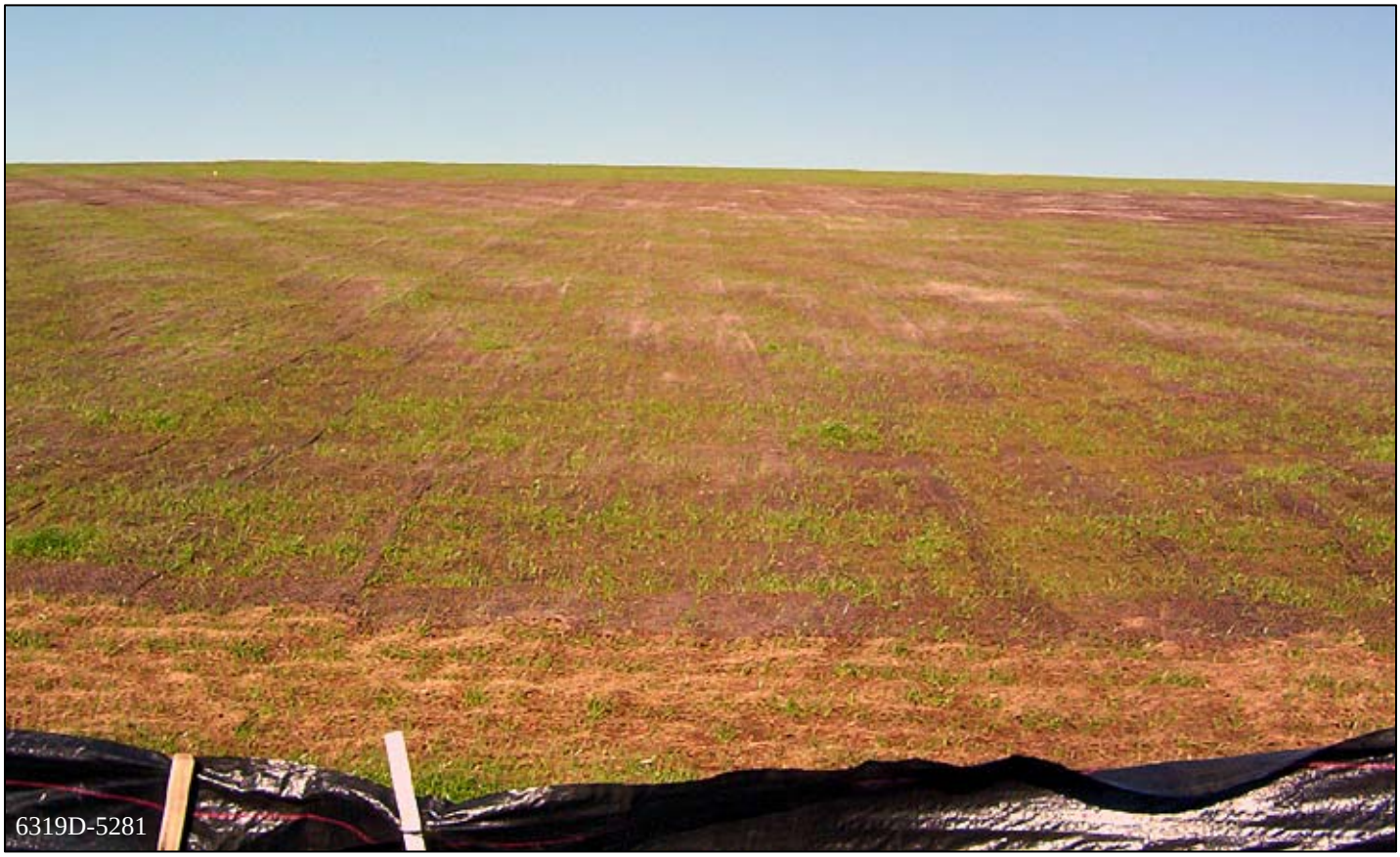
East Face Cell 7

West Face Cell 7

East Face Cell 8



West Face Cell 8



South Face Cell 8

South Drainage (looking west)

East Drainage Cell 4 (looking south)

East Drainage Cell 1 (looking south)

West Drainage Cell 4 (looking south)

West Inner Drainage Cell 1 (looking south)

West Outer Drainage Cell 1 (looking south)